

ROBERT SCHEICHL

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EDUCATION

Ph.D. in Mathematics, University of Bath, UK December 2000
Dipl.-Ing. Technische Mathematik J. K. Universität Linz, Austria October 1997

PROFESSIONAL EXPERIENCE

Professor of Numerical Analysis, University of Heidelberg, Germany since 2018
Chairman of the Graduate School HGS MathComp, University of Heidelberg, Germany since 2021
Professor of Scientific Computing, University of Bath, UK (20% since 2018) since 2011
Deputy Head of Department, University of Bath, UK 2016–2018
Lecturer & Senior Lecturer in Applied Mathematics, University of Bath, UK 2002–2011
Marie-Curie Postdoctoral Fellow, Institut Français du Pétrole, Paris 2001–2002
as well as visiting positions at *Isaac Newton Institute*, Cambridge, UK (2003, 2012, 2018); *University of Stuttgart* (2007); *Johann Radon Institute*, Linz, Austria (2007, 2011); *University of New South Wales*, Australia (2007, 2009, 2015); *Lawrence Livermore National Laboratory*, USA (2009)

ACADEMIC PRIZES & DISTINCTIONS

SIGEST Prize (Best Paper in *SIAM/ASA J. Uncertainty Quant.*, Vol. 3-6), SIAM 2019
Distinguished Romberg Guest Professorship, University of Heidelberg 2014–2017
SIAM Student Paper Prize, Society of Industrial and Applied Mathematics 2000

OTHER ACADEMIC ROLES & POSITIONS OF ESTEEM (AMONG OTHERS)

Associate Editor for *Mathematics of Computation (AMS)* since 2021
Associate Editor for *SIAM J. Numerical Analysis* since 2019
Associate Editor for *ESAIM: Mathematical Modelling and Numerical Analysis* since 2018
Associate Editor for *SIAM J. Scientific Computing* since 2016
Associate Editor for *SIAM/ASA J. Uncertainty Quantification* 2015–2017
Scientific Advisory Board Member, *Fondation Sciences Mathématiques de Paris* since 2020
Scientific Advisory Board Member, *Weierstrass Institute (WIAS)*, Berlin since 2016
Member of the *SIAM Membership Committee* 2014–2019
Member of Organising Committee *SIAM Conf. Computational Science & Engineering* 2019
Chair of *RICAM Special Semester*, Johann Radon Institute (ÖAW), Linz, Austria 2011
Review Panels for Austrian FWF (2016, 2020), German DFG (2018), Academy of Finland (2021)
External Member of hiring committees at FU Berlin (2020) and TU Braunschweig (2021)
External PhD Examiner at numerous occasions (incl. Oxford, Heidelberg, Leipzig, Heriott-Watt, EPFL Lausanne, Bergen, Uppsala, Münster, Imperial College, TU München)

PUBLICATION RECORD

64 journal papers (appeared or in press in top journals), **4 books & 25 proceedings papers**
3752 citations & h-index: 31 (Source: *Google Scholar* 20/04/21)

Top 10 Most Influential Publications

[Citations]

- S DOLGOV, K ANAYA-IZQUIERDO, C FOX, R SCHEICHL. Approximation and sampling of multivariate probability distributions in the TT decomposition, *Stat Comput* **30**, 2020 [18]
- G DETOMMASO, T CUI, A SPANTINI, Y MARZOUK, R SCHEICHL. A Stein variational Newton method, *Adv Neur Inform Proc Sys* **31**, 2018 (NeurIPS '18) [58]
- IG GRAHAM, FY KUO, D NUYENS, R SCHEICHL, IH SLOAN. Analysis of circulant embedding methods for sampling stationary random fields, *SIAM J Numer Anal* **56**, 2018 [33]
- T DODWELL, C KETELSEN, R SCHEICHL, A TECKENTRUP. A hierarchical multilevel Markov chain Monte Carlo algorithm with applications to UQ in subsurface flow, *SIAM/ASA J Uncertain Quantif* **3**, 2015 (SIGEST Prize: reprinted in *SIAM Review* **61**, 2019) [136]
- IG GRAHAM, FY KUO, JA NICHOLLS, R SCHEICHL, CH SCHWAB, IH SLOAN. Quasi-MC FE methods for elliptic PDEs with log-normal random coefficients, *Numer Math* **131**, 2015 [126]
- N SPILLANE, V DOLEAN, P HAURET, F NATAF, C PECHSTEIN, R SCHEICHL. Abstract robust coarse spaces for systems of PDEs via generalized eigenprob., *Numer Math* **126**, 2014 [172]
- J CHARRIER, R SCHEICHL, A TECKENTRUP. FE error analysis of elliptic PDEs with random coefficients and its application to MLMC methods, *SIAM J Numer Anal* **51**, 2013 [209]
- KA CLIFFE, M GILES, R SCHEICHL, A TECKENTRUP. Multilevel Monte Carlo methods and applications to elliptic PDEs with random coefficients, *Comput Visual Sci* **14**, 2011. [489]
- C PECHSTEIN, R SCHEICHL. Analysis of FETI f. multiscale PDEs, *Numer Math* **111**, 2008 [101]
- IG GRAHAM, P LECHNER, R SCHEICHL. Domain decomposition for multiscale PDEs, *Numer Math* **106**, 2007 [190]

KEYNOTE LECTURES (SELECTION)

- 90th GAMM Annual Meeting (*Gesellschaft für Angewandte Mathem. & Mechanik*) Vienna, 2019
- 12th European Conference on Numerical Mathematics (*ENUMATH*) Bergen, 2017
- 26th Biennial Conference on Numerical Analysis Glasgow, 2015
- 20th Int. Conference on Computational Methods for Water Resources Stuttgart, 2014
- 20th Int. Conference on Domain Decomposition Methods (*DD20*) San Diego, 2011
- 15th Computational Techniques and Applications Conference (*CTAC2010*) Sydney, 2010

MAJOR GRANTS AS PI (SELECTION): [Total Income: ~ €25M / ~ €4M AS PI]

- DFG Cluster of Excellence *STRUCTURES Exploratory Project* with Berges (Inst. Theo. Phys.), Jansen (DESY Zeuthen), Müller (Bath) (**PI**, 2021-23) [€117K]
- EPSRC Maths for Manufacturing Grant EP/K031368/1 with GKN Aerospace (**joint PI** with Butler, Mech. Eng., 2014-17) [£499K]
- NERC Programme Grants NE/J005576/1 & NE/K006754/1 with Met Office, STFC, Exeter, Reading, Imperial, Leeds, Manchester (**Bath PI**, 2011-16) [Bath share: £455K]
- EPSRC Collaborative Grant EP/H051503/1 (under the Energy Mission Programme) with Nottingham, Oxford, NDA, Serco TAS (**Lead-PI**, 2011-14) [£677K]

RESEARCH SUPERVISION

PhD Students (completed): R Norton (2008), S Buckeridge (2010), E Dodgson (2011), A Teckentrup (2013), G Katsiolides (2018), M Parkinson (2018), G Detommaso (2020)

Postdocs (completed): J Van lent (2006-08), A Ferreira (2012-13), E Ullmann (2011-14), E Müller (2011-15), T Kim (2014-15), A Reinartz (2016-17), S Dolgov (2016-18), A Gilbert (2018-20)

Heidelberg, 20th April 2021.